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## CLAIMS

We claim:

1. A method for managing outages of information technology resources, comprising:  
collecting infrastructure performance data;  
collecting process data;  
10 correlating the infrastructure performance data and the process data; and  
generating a risk profile from the correlated data.
2. The method as in claim 1, wherein collecting infrastructure performance data is  
performed concurrently with collecting process data.
- 15 3. The method as in claim 1, wherein collecting infrastructure performance data further  
comprises:  
collecting infrastructure performance data from at least one automated testing tool,  
wherein the infrastructure performance data further comprises at least one of application  
20 performance data, server error logs, application post mortem data, and outage data.
4. The method as in claim 1, wherein collecting process data further comprises:  
collecting process data from at least one manual-work-process tracking system.
- 25 5. The method as in claim 4, wherein collecting process data from at least one manual-  
work-process tracking system further comprises:  
collecting process data from at least one change control system.
6. The method as in claim 4, wherein collecting process data from at least one manual-  
30 work-process tracking system further comprises:  
collecting process data from at least one root-cause analysis system.
7. The method as in claim 4, wherein collecting process data from at least one manual-  
work-process tracking system further comprises:  
35 collecting process data from at least one service-level control system.
8. The method as in claim 1, wherein the correlating further comprises:

5 correlating application data, server data and database data from the infrastructure performance data and the process data.

9. The method as in claim 1, wherein the correlating further comprises:  
correlating the infrastructure performance data and the process data for each of the  
10 information technology resources, in reference to organizational control of the resources.

10. The method as in claim 1, wherein the correlating further comprises:  
correlating at least one type of resource data selected from the group consisting of  
application resource data, server resource data and database resource data, in reference to a  
15 common data object.

11. The method as in claim 1, wherein generating a risk profile further comprises:  
generating a risk score from a frequency of outages in the infrastructure performance  
data and a frequency of changes in the process data, for each of the information technology  
20 resources.

12. The method as in claim 1, wherein the infrastructure performance data further  
comprises at least one measurement of performance for an information technology resource  
and the process data further comprises at least one measurement of activity for the  
25 information technology resource, and generating a risk profile further comprises:  
generating a score for each of the measurements, each measurement being multiplied  
by a weighting value associated with each measurement, yielding a plurality of scores; and  
summing the plurality of scores, yielding a risk score.

30 13. The method as in claim 12, wherein generating a score for each of the measurements further comprises:

generating the score with a higher magnitude for an increasing frequency of outages  
of the information technology resource as indicated in the infrastructure performance data;  
and

35 generating the score with a higher magnitude for an increasing frequency of changes  
of the information technology resource as indicated in the process data.

- 5     14.     The method as in claim 12, wherein generating a score for each of the measurements further comprises:

generating the score with a lower magnitude for a decreasing frequency of outages of the information technology resource as indicated in the infrastructure performance data; and

- 10     generating the score with a lower magnitude for a decreasing frequency of changes of the information technology resource as indicated in the process data.

15.     The method as in claim 1, wherein a higher risk score is generated for information technology resources having an increasing frequency of outages.

5     16.     A method for predicting outages of an information technology resource, comprising:  
                    generating a singular risk score from infrastructure performance data of the  
                    information technology resource and process data of the information technology  
                    resource; and  
                    providing an alert to a user when the singular risk score exceeds a  
10             predetermined threshold.

17.     The method as in claim 16, wherein a higher singular risk score is generated for an  
increasing frequency of outages of the information technology resource.

15     18.     The method as in claim 16, wherein generating a singular risk score further  
comprises:  
                    generating the singular risk score with a higher magnitude for an increasing frequency  
of outages of the information technology resource as indicated in the infrastructure  
performance data;  
20             generating the singular risk score with a higher magnitude for an increasing frequency  
of changes of the information technology resource as indicated in the process data;  
                    generating the singular risk score with a lower magnitude for a decreasing frequency  
of outages of the information technology as indicated in the infrastructure performance data;  
and  
25             generating the singular risk score with a lower magnitude for a decreasing frequency  
of changes of the information technology as indicated in the process data.

19.     The method as in claim 16, wherein generating a singular risk score further  
comprises:  
30             generating the singular risk score in correspondence to the frequency of outages  
indicated in the infrastructure performance data and in correspondence to the frequency of  
changes in the process data.

20.     The method as in claim 16, wherein the infrastructure performance data further  
35     comprises at least one measurement of performance and the process data further comprises at  
least one measurement of activity, and generating a singular risk score further comprises:

5           generating a singular score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of weighted scores; and

              summing the plurality of weighted scores, yielding the singular risk score.

10    21.    The method as in claim 16, the method further comprising:

              collecting (304) the process data (208) from at least one manual-work-process tracking system;

              collecting the infrastructure performance data; and

              correlating the infrastructure performance data and the process data.

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22.    The method as in claim 21, wherein collecting process data from at least one manual-work-process tracking system further comprises:

              collecting process data from at least one change control system.

20    23.    The method as in claim 21, wherein collecting infrastructure performance data further comprises:

              collecting infrastructure performance data from at least one automated testing tool, and wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage data.

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24.    The method as in claim 21, wherein the correlating further comprises:

              correlating application data, server data and database data from the infrastructure performance data and the process data.

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- 5     25.     A method for managing data that is predictive of reliability of an information technology system, comprising:
- collecting process data associated with at least one information technology resource;
- collecting infrastructure performance data associated with the at least one information technology resource; and
- 10     correlating the infrastructure performance data and the process data for the information technology resource.
26.     The method as in claim 25, wherein collecting infrastructure performance data is performed after collecting process data.
- 15     27.     The method as in claim 25, wherein collecting infrastructure performance data further comprises:
- collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage data.
- 20     28.     The method as in claim 25, wherein collecting process data further comprises: collecting process data from at least one software-change control system.
- 25     29.     The method as in claim 25, wherein collecting process data further comprises: collecting process data from at least one root-cause analysis system.
- 30     30.     The method as in claim 25, wherein collecting process data from further comprises: collecting process data from at least one service-level control system.
31.     The method as in claim 25, wherein the correlating further comprises: correlating application data, server data and database data from the infrastructure performance data and the process data.
- 35     32.     The method as in claim 25, wherein the correlating further comprises: correlating the infrastructure performance data and the process data for the at least one information technology resource, in reference to organizational control of the resource.

5     33.     The method as in claim 25, wherein the correlating further comprises:  
correlating at least one type of resource data selected from the group consisting of  
application resource data, server resource data and database resource data, in reference to a  
common data object.

10    34.     The method as in claim 25, the method further comprising:  
generating a risk score for each of the at least one information technology resource  
from the infrastructure performance data and the process data, wherein the magnitude of each  
risk score is in correspondence to the frequency of outages indicated in the infrastructure  
performance data and wherein the magnitude of each risk score is in correspondence to the  
15   frequency of changes in the process data.

35.     The method as in claim 34, wherein the infrastructure performance data further  
comprises at least one measurement of performance and the process data further comprises at  
least one measurement of activity, and generating a risk profile further comprises:  
20     generating a plurality of scores by multiplying each measurement with a weighting  
value associated with each measurement; and  
generating a risk score from a sum of the plurality of scores.

- 5     36.     A method for assessing reliability of a plurality of information technology resources,  
         comprising:  
         collecting infrastructure data;  
         collecting process data; and  
         generating a risk profile for each of the plurality of information technology resources,  
10     from the infrastructure data and the process data.
37.     The method as in claim 36, wherein collecting process data further comprises:  
         collecting process data from at least one manual-work-process tracking system.
- 15     38.     The method as in claim 36, wherein collecting process data from at least one manual-  
work-process tracking system further comprises:  
         collecting process data from at least one change control system.
39.     The method as in claim 36, wherein collecting process data from at least one manual-  
20     work-process tracking system further comprises:  
         collecting process data from at least one root-cause analysis system.
40.     The method as in claim 36, wherein collecting process data from at least one manual-  
work-process tracking system further comprises:  
25     collecting process data from at least one service-level control system.
41.     The method as in claim 36, wherein collecting infrastructure data further comprises:  
         collecting infrastructure data from at least one automated testing tool.
- 30     42.     The method as in claim 36, wherein the method further comprises:  
         correlating the infrastructure data and the process data,  
and generating a risk profile further comprises:  
         generating a risk profile from the correlated data.
- 35     43.     The method as in claim 42, wherein the correlating further comprises:  
         correlating application data, server data and database data from the infrastructure data  
         and the process data for each of the information technology resources.



5     44.     The method as in claim 36, wherein generating a risk profile further comprises:  
generating a risk score from the infrastructure data and the process data, wherein the  
magnitude of the risk score corresponds to the frequency of outages indicated in the  
infrastructure data and wherein the magnitude of the risk score corresponds to the frequency  
of changes in the process data, for each of the plurality of information technology resources.

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45.     The method as in claim 36, wherein the infrastructure data further comprises at least  
one measurement of performance for each of the plurality of information technology  
resources and the process data further comprises at least one measurement of activity for each  
of the plurality of information technology resources, and generating a risk profile further  
15 comprises:

generating a score for each of the at least one measurement, each measurement being  
multiplied by a weighting value associated with each measurement, yielding at least one  
score; and

summing the at least one score, yielding a risk score.

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46.     The method as in claim 45, wherein generating a score further comprises:  
generating the score with a higher magnitude for resources having an increasing  
frequency of outages as indicated in the infrastructure data; and

generating the score with a higher magnitude for resources having an increasing  
25 frequency of changes as indicated in the process data.

47.     The method as in claim 45, wherein generating a risk score further comprises:  
generating the risk score with a lower magnitude for resources having a decreasing  
frequency of outages as indicated in the infrastructure data; and

30 generating the risk score with a lower magnitude for resources having a decreasing  
frequency of changes as indicated in the process data.

48.     The method as in claim 36, wherein a higher risk score is generated for resources  
having an increasing frequency of outages.

- 5     49.     A computer-accessible medium having executable instructions to manage outages of information technology resources, the executable instructions capable of directing a processor to perform:

collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application  
10     performance data, server error logs, application post mortem data, and outage data;  
collecting process data from at least one of a one service-level control system, a change control system, a root-cause analysis system;  
correlating the infrastructure performance data and the process data; and  
generating a risk profile for each of the information technology resources from a  
15     frequency of outages in the correlated data and a frequency of changes in the correlated data.

50.     The computer-accessible medium as in claim 49, wherein collecting infrastructure performance data is performed concurrently with collecting process data.

- 20     51.     The computer-accessible medium as in claim 49, wherein the correlating further comprises:

correlating application data, server data and database data from the infrastructure performance data and the process data.

- 25     52.     The computer-accessible medium as in claim 49, wherein the correlating further comprises:

correlating the infrastructure performance data and the process data for each of the information technology resources, in reference to organizational control of the resources.

- 30     53.     The computer-accessible medium as in claim 49, wherein the infrastructure performance data further comprises at least one measurement of performance for an information technology resource and the process data further comprises at least one measurement of activity for the information technology resource, and generating a risk profile further comprises:

35     generating a score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of scores; and  
summing the plurality of scores, yielding a risk score.

- 5     54.     The computer-accessible medium as in claim 53, wherein generating a score for each of the measurements further comprises:

generating the score with a higher magnitude for an increasing frequency of outages of the information technology resource as indicated in the infrastructure performance data;

- 10     generating the score with a higher magnitude for an increasing frequency of changes of the information technology resource as indicated in the process data;

generating the score with a lower magnitude for a decreasing frequency of outages of the information technology resource as indicated in the infrastructure performance data; and

generating the score with a lower magnitude for a decreasing frequency of changes of the information technology resource as indicated in the process data.

5 55. A computer-accessible medium having executable instructions to predict outages of an information technology resource, the executable instructions capable of directing a processor to perform:

generating a singular risk score from infrastructure performance data of the information technology resource and process data of the information technology resource; and  
10 providing an alert to a user when the singular risk score exceeds a predetermined threshold.

56. The computer-accessible medium as in claim 55, wherein generating a singular risk score further comprises:

generating the singular risk score in correspondence to the frequency of outages indicated in the infrastructure performance data and in correspondence to the frequency of changes in the process data.  
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57. The computer-accessible medium as in claim 55, wherein the infrastructure performance data further comprises at least one measurement of performance and the process data further comprises at least one measurement of activity, and generating a singular risk score further comprises:  
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generating a singular score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of weighted scores; and  
25 summing the plurality of weighted scores, yielding the singular risk score.

58. The computer-accessible medium as in claim 55, the method further comprising: collecting (304) the process data (208) from at least one manual-work-process tracking system;  
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collecting the infrastructure performance data; and  
correlating the infrastructure performance data and the process data.

59. The computer-accessible medium as in claim 58, wherein collecting process data from at least one manual-work-process tracking system further comprises:  
35

collecting process data from at least one change control system; and  
collecting infrastructure performance data from at least one automated testing tool, and wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage data.



- 5     60.     A computer-accessible medium having executable instructions to manage data that is predictive of reliability of an information technology system, the executable instructions capable of directing a processor to perform:

collecting process data associated with at least one information technology resource;  
collecting infrastructure performance data associated with the at least one information

10           technology resource; and

correlating the infrastructure performance data and the process data for the information technology resource.

61.     The computer-accessible medium as in claim 60, wherein collecting infrastructure performance data further comprises:

collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage data, and wherein collecting process data further comprises:

20           collecting process data from at least one software-change control system, at least one root-cause analysis system, and at least one service-level control system.

62.     The computer-accessible medium as in claim 60, wherein the correlating further comprises:

25           correlating application data, server data and database data from the infrastructure performance data and the process data, for the at least one information technology resource, and in reference to organizational control of the resource.

63.     The computer-accessible medium as in claim 60, wherein the correlating further comprises:

30           correlating at least one type of resource data selected from the group consisting of application resource data, server resource data and database resource data, in reference to a common data object.

64.     The computer-accessible medium as in claim 60, the method further comprising:

35           generating a risk score for each of the at least one information technology resource from the infrastructure performance data and the process data, wherein the magnitude of each risk score is in correspondence to the frequency of outages indicated in the infrastructure

- 5 performance data and wherein the magnitude of each risk score is in correspondence to the frequency of changes in the process data.

65. The computer-accessible medium as in claim 64, wherein the infrastructure performance data further comprises at least one measurement of performance and the process  
10 data further comprises at least one measurement of activity, and generating a risk profile further comprises:

generating a plurality of scores by multiplying each measurement with a weighting value associated with each measurement; and

generating a risk score from a sum of the plurality of scores.

- 5     66.     A computer-accessible medium having executable instructions to assess reliability of a plurality of information technology resources, the executable instructions capable of directing a processor to perform:

collecting infrastructure data;

collecting process data from at least one change control system; and

- 10     generating a risk profile for each of the plurality of information technology resources, from the infrastructure data and the process data.

67.     The computer-accessible medium as in claim 66, wherein collecting infrastructure data further comprises:

- 15     collecting infrastructure data from at least one automated testing tool.

68.     The computer-accessible medium as in claim 66, wherein the method further comprises:

correlating the infrastructure data and the process data,

- 20     and generating a risk profile further comprises:

generating a risk profile from the correlated data.

69.     The computer-accessible medium as in claim 66, wherein generating a risk profile further comprises:

- 25     generating a risk score from the infrastructure data and the process data, wherein the magnitude of the risk score corresponds to the frequency of outages indicated in the infrastructure data and wherein the magnitude of the risk score corresponds to the frequency of changes in the process data, for each of the plurality of information technology resources.

- 30     70.     The computer-accessible medium as in claim 66, wherein the infrastructure data further comprises at least one measurement of performance for each of the plurality of information technology resources and the process data further comprises at least one measurement of activity for each of the plurality of information technology resources, and generating a risk profile further comprises:

- 35     generating a score for each of the at least one measurement, each measurement being multiplied by a weighting value associated with each measurement, yielding at least one score; and

summing the at least one score, yielding a risk score.



- 5     71.     A computer data signal embodied in a carrier wave and representing a sequence of instructions which, when executed by a processor, cause the processor to perform a method of:

collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application  
10     performance data, server error logs, application post mortem data, and outage data;  
collecting process data from at least one of a one service-level control system, a change control system, a root-cause analysis system;  
correlating the infrastructure performance data and the process data; and  
generating a risk profile for each of the information technology resources from a  
15     frequency of outages in the correlated data and a frequency of changes in the correlated data.

72.     The computer data signal as in claim 71, wherein the correlating further comprises:  
correlating the infrastructure performance data and the process data for each of the information technology resources.

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73.     The computer data signal as in claim 71, wherein the infrastructure performance data further comprises at least one measurement of performance for an information technology resource and the process data further comprises at least one measurement of activity for the information technology resource, and generating a risk profile further comprises:

25     generating a score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of scores; and  
summing the plurality of scores, yielding a risk score.

5     74.     A computer data signal embodied in a carrier wave and representing a sequence of instructions which, when executed by a processor, cause the processor to perform a method of:

generating a singular risk score from infrastructure performance data of the information technology resource and process data of the information technology resource;

10     and

providing an alert to a user when the singular risk score exceeds a predetermined threshold.

75.     The computer data signal as in claim 74, wherein generating a singular risk score  
15     further comprises:

generating the singular risk score in correspondence to the frequency of outages indicated in the infrastructure performance data and in correspondence to the frequency of changes in the process data.

20     76.     The computer data signal as in claim 74, wherein the infrastructure performance data further comprises at least one measurement of performance and the process data further comprises at least one measurement of activity, and generating a singular risk score further comprises:

generating a singular score for each of the measurements, each measurement being  
25     multiplied by a weighting value associated with each measurement, yielding a plurality of weighted scores; and

summing the plurality of weighted scores, yielding the singular risk score.

77.     The computer data signal as in claim 74, the method further comprising:  
30     collecting (304) the process data (208) from at least one manual-work-process tracking system;

collecting the infrastructure performance data; and

correlating the infrastructure performance data and the process data.

5     78.     A computer data signal embodied in a carrier wave and representing a sequence of instructions which, when executed by a processor, cause the processor to perform a method of:

collecting process data associated with at least one information technology resource;  
collecting infrastructure performance data associated with the at least one information  
10    technology resource; and  
correlating the infrastructure performance data and the process data for the  
information technology resource.

79.     The computer data signal as in claim 78, wherein collecting process data further  
15    comprises:

collecting process data from at least one software-change control system, at least one  
root-cause analysis system, and at least one service-level control system.

80.     The computer data signal as in claim 78, wherein the correlating further comprises:  
20     correlating at least one type of resource data selected from the group consisting of  
application resource data, server resource data and database resource data, in reference to a  
common data object.

81.     The computer data signal as in claim 78, the method further comprising:  
25     generating a risk score for each of the at least one information technology resource  
from the infrastructure performance data and the process data, wherein the magnitude of each  
risk score is in correspondence to the frequency of outages indicated in the infrastructure  
performance data and wherein the magnitude of each risk score is in correspondence to the  
frequency of changes in the process data, and

30     wherein the infrastructure performance data further comprises at least one  
measurement of performance and the process data further comprises at least one  
measurement of activity, and generating a risk profile further comprises:

generating a plurality of scores by multiplying each measurement with a weighting  
value associated with each measurement; and

35     generating a risk score from a sum of the plurality of scores.

5     82.     A computer data signal embodied in a carrier wave and representing a sequence of instructions which, when executed by a processor, cause the processor to perform a method of:

collecting infrastructure data;  
collecting process data from at least one change control system; and  
10     generating a risk profile for each of the plurality of information technology resources,  
from the infrastructure data and the process data.

83.     The computer data signal as in claim 82, wherein the method further comprises:  
correlating the infrastructure data and the process data,  
15     and generating a risk profile further comprises:  
generating a risk profile from the correlated data.

84.     The computer data signal as in claim 82, wherein generating a risk profile further comprises:  
20     generating a risk score from the infrastructure data and the process data, wherein the magnitude of the risk score corresponds to the frequency of outages indicated in the infrastructure data and wherein the magnitude of the risk score corresponds to the frequency of changes in the process data, for each of the plurality of information technology resources.

25     85.     The computer data signal as in claim 82, wherein the infrastructure data further comprises at least one measurement of performance for each of the plurality of information technology resources and the process data further comprises at least one measurement of activity for each of the plurality of information technology resources, and generating a risk profile further comprises:

30     generating a score for each of the at least one measurement, each measurement being multiplied by a weighting value associated with each measurement, yielding at least one score; and  
summing the at least one score, yielding a risk score.

5     86.     An apparatus comprising:

        a collector of infrastructure performance data from at least one automated testing tool,  
wherein the infrastructure performance data further comprises at least one of application  
performance data, server error logs, application post mortem data, and outage data;

        a collector of process data from at least one of a one service-level control system, a  
10    change control system, a root-cause analysis system;

        a correlator of the infrastructure performance data and the process data; and

        a generator of a risk profile for each of the information technology resources from a  
frequency of outages in the correlated data and a frequency of changes in the correlated data.

15     87.     The apparatus as in claim 86, wherein the correlator further comprises:

        a correlator of the infrastructure performance data and the process data for each of the  
information technology resources.

88.     The apparatus as in claim 86, wherein the infrastructure performance data further  
20    comprises at least one measurement of performance for an information technology resource  
and the process data further comprises at least one measurement of activity for the  
information technology resource, and the risk profile generator further comprises:

        a generator of a score for each of the measurements, each measurement being  
multiplied by a weighting value associated with each measurement, yielding a plurality of  
25    scores; and

        an adder of the plurality of scores, yielding a risk score.

5 89. An apparatus comprising:

a generator of a singular risk score from infrastructure performance data of the information technology resource and process data of the information technology resource; and

10 a provider of an alert to a user when the singular risk score exceeds a predetermined threshold.

90. The apparatus as in claim 89, wherein generator of the singular risk score further comprises:

15 a generator of the singular risk score, the score being in correspondence to a frequency of outages indicated in the infrastructure performance data and in correspondence to a frequency of changes in the process data.

91. The apparatus as in claim 89, wherein the infrastructure performance data further comprises at least one measurement of performance and the process data further comprises at least one measurement of activity, and the generator of the singular risk score further comprises:

20 a generator of a singular score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of weighted scores; and

25 an adder of the plurality of weighted scores, yielding the singular risk score.

92. The apparatus as in claim 89, the method further comprising:

a collector of the process data from at least one manual-work-process tracking system; a collector of the infrastructure performance data; and

30 a correlator of the infrastructure performance data and the process data.

- 5     93.     An apparatus comprising:  
            a collector of process data associated with at least one information technology  
resource;  
            a collector of infrastructure performance data associated with the at least one  
information technology resource; and  
10           a correlator of the infrastructure performance data and the process data for the  
information technology resource.
94.     The apparatus as in claim 93, wherein a collector of process data further comprises:  
            a collector of process data from at least one software-change control system, at least  
15     one root-cause analysis system, and at least one service-level control system.
95.     The apparatus as in claim 93, wherein the correlator of further comprises:  
            a correlator of at least one type of resource data selected from the group consisting of  
application resource data, server resource data and database resource data, in reference to a  
20     common data object.
96.     The apparatus as in claim 93, the apparatus further comprising:  
            a generator of a risk score for each of the at least one information technology resource  
from the infrastructure performance data and the process data, wherein the magnitude of each  
25     risk score is in correspondence to the frequency of outages indicated in the infrastructure  
performance data and wherein the magnitude of each risk score is in correspondence to the  
frequency of changes in the process data, and  
            wherein the infrastructure performance data further comprises at least one  
measurement of performance and the process data further comprises at least one  
30     measurement of activity, and a generator of a risk profile further comprises:  
            a generator of a plurality of scores that is operable to multiply each measurement with  
a weighting value associated with each measurement; and  
            a generator of a risk score from a sum of the plurality of scores.

5     97.     An apparatus comprising:  
         a collector of infrastructure data;  
         a collector of process data from at least one change control apparatus; and  
         a generator of a risk profile for each of the plurality of information technology  
resources, from the infrastructure data and the process data.

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98.     The apparatus as in claim 97, wherein the method further comprises:  
         a correlator of the infrastructure data and the process data,  
and wherein the generator of the risk profile further comprises:  
         a generator of the risk profile from the correlated data.

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99.     The apparatus as in claim 97, wherein the generator of the risk profile further  
comprises:  
         a generator of a risk score from the infrastructure data and the process data, wherein  
the magnitude of the risk score corresponds to the frequency of outages indicated in the  
20 infrastructure data and wherein the magnitude of the risk score corresponds to the frequency  
of changes in the process data, for each of the plurality of information technology resources.

100.    The apparatus as in claim 97, wherein the infrastructure data further comprises at least  
one measurement of performance for each of the plurality of information technology  
25 resources and the process data further comprises at least one measurement of activity for each  
of the plurality of information technology resources, and a generator of a risk profile further  
comprises:

         a multiplier of the at least one measurement to a weighting value associated with each  
measurement, yielding at least one score; and  
30           an adder of the at least one score, yielding a risk score.



5 101. A system to manage outages of information technology resources, the system comprising:

means for collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage  
10 data;

means for collecting process data from at least one of a one service-level control system, a change control system, a root-cause analysis system;

means for correlating the infrastructure performance data and the process data; and

means for generating a risk profile for each of the information technology resources  
15 from a frequency of outages in the correlated data and a frequency of changes in the correlated data.

102. The system as in claim 101, wherein the correlating means further comprises:

means for correlating application data, server data and database data from the  
20 infrastructure performance data and the process data.

103. The system as in claim 101, wherein the means for correlating further comprises:

means for correlating the infrastructure performance data and the process data for each of the information technology resources, in reference to organizational control of the  
25 resources.

104. The system as in claim 101, wherein the infrastructure performance data further comprises at least one measurement of performance for an information technology resource and the process data further comprises at least one measurement of activity for the  
30 information technology resource, and the means for generating a risk profile further comprises:

means for generating a score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of scores; and

35 means for summing the plurality of scores, yielding a risk score.

105. The system as in claim 104, wherein the means for generating a score for each of the measurements further comprises:

5 means for generating the score with a higher magnitude for an increasing frequency of outages of the information technology resource as indicated in the infrastructure performance data;

means for generating the score with a higher magnitude for an increasing frequency of changes of the information technology resource as indicated in the process data;

10 means for generating the score with a lower magnitude for a decreasing frequency of outages of the information technology resource as indicated in the infrastructure performance data; and

means for generating the score with a lower magnitude for a decreasing frequency of changes of the information technology resource as indicated in the process data.

- 5     106.   A system to predict outages of an information technology resource, the system comprising:

          means for generating a singular risk score from infrastructure performance data of the information technology resource and process data of the information technology resource; and

- 10           means for providing an alert to a user when the singular risk score exceeds a predetermined threshold.

107.   The system as in claim 106, wherein the means for generating a singular risk score further comprises:

- 15           means for generating the singular risk score in correspondence to the frequency of outages indicated in the infrastructure performance data and in correspondence to the frequency of changes in the process data.

108.   The system as in claim 106, wherein the infrastructure performance data further comprises at least one measurement of performance and the process data further comprises at least one measurement of activity, and the means for generating a singular risk score further comprises:

          means for generating a singular score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of weighted scores; and

          means for summing the plurality of weighted scores, yielding the singular risk score.

109.   The system as in claim 106, the system further comprising:

          means for collecting (304) the process data (208) from at least one manual-work-  
30   process tracking system;

          means for collecting the infrastructure performance data; and

          means for correlating the infrastructure performance data and the process data.

110.   The system as in claim 109, wherein collecting process data from at least one manual-  
35   work-process tracking system further comprises:

          means for collecting process data from at least one change control system; and

          means for collecting infrastructure performance data from at least one automated testing tool, and wherein the infrastructure performance data further comprises at least one of

- 5 application performance data, server error logs, application post mortem data, and outage data.

5 111. A system to manage data that is predictive of reliability of an information technology system, the system comprising:

means for collecting process data associated with at least one information technology resource;

10 means for collecting infrastructure performance data associated with the at least one information technology resource; and

means for correlating the infrastructure performance data and the process data for the information technology resource.

112. The system as in claim 111, wherein the means for collecting infrastructure performance data further comprises:

means for collecting infrastructure performance data from at least one automated testing tool, wherein the infrastructure performance data further comprises at least one of application performance data, server error logs, application post mortem data, and outage data, and

20 wherein the means for collecting process data further comprises:

means for collecting process data from at least one software-change control system, at least one root-cause analysis system, and at least one service-level control system.

113. The system as in claim 111, wherein the means for correlating further comprises:

25 means for correlating application data, server data and database data from the infrastructure performance data and the process data, for the at least one information technology resource, and in reference to organizational control of the resource.

114. The system as in claim 111, wherein the means for correlating further comprises:

30 means for correlating at least one type of resource data selected from the group consisting of application resource data, server resource data and database resource data, in reference to a common data object.

115. The system as in claim 111, the system further comprises:

35 means for generating a risk score for each of the at least one information technology resource from the infrastructure performance data and the process data, wherein the magnitude of each risk score is in correspondence to the frequency of outages indicated in the

- 5 infrastructure performance data and wherein the magnitude of each risk score is in correspondence to the frequency of changes in the process data.

116. The system as in claim 115, wherein the infrastructure performance data further comprises at least one measurement of performance and the process data further comprises at  
10 least one measurement of activity, and the means for generating a risk profile further comprises:

means for generating a plurality of scores by multiplying each measurement with a weighting value associated with each measurement; and

means for generating a risk score from a sum of the plurality of scores.

5     117.    A system to assess reliability of a plurality of information technology resources, the system comprising:  
          means for collecting infrastructure data;  
          means for collecting process data from at least one change control system; and  
          means for generating a risk profile for each of the plurality of information technology  
10   resources, from the infrastructure data and the process data.

118.    The system as in claim 117, wherein the means for collecting infrastructure data further comprises:  
          means for collecting infrastructure data from at least one automated testing tool.

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119.    The system as in claim 117, wherein the system further comprises:  
          means for correlating the infrastructure data and the process data,  
and the means for generating a risk profile further comprises:  
          means for generating a risk profile from the correlated data.

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120.    The system as in claim 117, wherein the means for generating a risk profile further comprises:  
          means for generating a risk score from the infrastructure data and the process data,  
wherein the magnitude of the risk score corresponds to the frequency of outages indicated in  
25   the infrastructure data and wherein the magnitude of the risk score corresponds to the  
frequency of changes in the process data, for each of the plurality of information technology  
resources.

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121.    The system as in claim 117, wherein the infrastructure data further comprises at least one measurement of performance for each of the plurality of information technology  
resources and the process data further comprises at least one measurement of activity for each  
of the plurality of information technology resources, and the means for generating a risk  
profile further comprises:

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          means for generating a score for each of the at least one measurement, each  
measurement being multiplied by a weighting value associated with each measurement,  
yielding at least one score; and  
          means for adding the at least one score, yielding a risk score.

- 5 122. A computer-accessible medium having executable instructions to manage outages of information technology resources, the executable instructions capable of directing a processor to perform:

identifying measurements in infrastructure data and process data that are indicative of failure rates of information technology resources;

- 10 determining significance of each of the measurements; and  
modifying a method for calculating risk from the significance.

123. The computer-accessible medium as in claim 122, wherein the method is performed periodically in order to heuristically update failure prediction analysis.

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124. The computer-accessible medium as in claim 122, wherein the method for calculating risk further comprises:

generating a score for each of the measurements, each measurement being multiplied by a weighting value associated with each measurement, yielding a plurality of scores; and

- 20 summing the plurality of scores, yielding a risk score.